

ABSTRACT OF THE DISCLOSURE

Upon receipt of a public value X from a device A, a device B estimates a time to be taken for calculation of a public value Y and a time to be taken for calculation of a common key K , and then
5 calculates a required operation time T_b required at the device B for a key exchanging process for transmission to the device A to report a response delay time S306 and S307. Then, the device B actually calculates the public value Y and the common key K S309
10 and S310. Upon receipt of the required operation time T_b , the device A extends a waiting limit (timeout time) for a response from the device B to a time when the required operation time T_b elapses from the reception S311.